

IN THE CLAIMS

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Cancel claims 1 and 2 and add the following new claims:

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--32. Dry microballoons which, upon dispersion in an aqueous carrier liquid, form an aqueous dispersion comprising microballoons bounded by a 50-500 nm thick polymer membrane filled with air or a gas, the microballoons having a mean size in the range of a fraction of micron to 1000 microns and the membrane polymer being biodegradable, synthetic, deformable, resilient and selected from the group of interfacially depositable polymers.

33. The dry microballoons of claim 32, wherein the microballoons have size in the range of 0.5-10 μm and the membrane is either impervious or permeable to bioactive liquids for increasing the rate of biodegradation.

34. The dry microballoons of claim 32, wherein the polymer membrane is porous and has porosity ranging from a few nanometers to several thousands of nanometers.

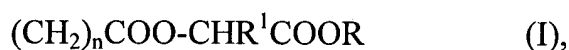
35. The dry microballoons of claim 34, wherein the polymer membrane has a porosity of 50 to 2,000 nm.

36. The dry microballoons of claim 32 or 33 wherein the polymer of the membrane is a biodegradable polymer selected from the group consisting of polysaccharides, polyamino-acids, polylactides and polyglycolides and their copolymers, copolymers of lactides and lactones, polypeptides, poly-(ortho)esters, polydioxanone, poly- β -aminoketones, polyphosphazenes, polyanhydrides and polyalkyl-(cyano)acrylates.

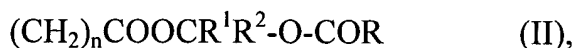
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37. The dry microballoons of claim 32 or 33 wherein the membrane polymer is selected from the group consisting of polyglutamic or polyaspartic acid derivatives and their copolymers with other amino acids.

38. The dry microballoons of claim 37, wherein the polyglutamic and polyaspartic acid derivatives are selected from the group consisting of esters and amides involving a carboxylated side function, said side function having formulae:



or



or



where R is an alkyl or aryl substituent; R^1 and R^2 are H or lower alkyls, or R and R^1 are connected together by a substituted or unsubstituted linking member to form a 5- or 6-membered ring; n is 1 or 2; p is 1, 2 or 3; m is an integer from 1 to 5 and X is a side chain of an amino acid residue.

39. The dry microballoons of claim 32 or 33, wherein the membrane polymer contains additives to control the degree of elasticity and the size and density of the pores for permeability control.

40. The dry microballoons of claim 39, wherein said additives include plasticizers, amphipatic substances and hydrophobic compounds.

41. The dry microballoons of claim 40, wherein the plasticizers include isopropyl myristate, glyceryl monostearate and the like to control flexibility, the amphipatic

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substances include surfactants and phospholipids like the lecithins to control permeability by increasing porosity and the hydrophobic compounds are high molecular weight hydrocarbon paraffin-waxes to reduce porosity.

42. The dry microballoons of claim 40, wherein the additives include polymers of molecular weight in the range of 1000 to 15,000 to control softness and resiliency of the microballoon membrane.

43. The dry microballoons of claim 42, wherein the polymer additives are selected from the group consisting of polylactides, polyglycolides, polyalkylene glycols like polyethylene glycol and polypropylene glycol, and polyols.

44. The dry microballoons according to claim 32 or 33, wherein the gas in the microballoons is a freon.

45. The dry microballoons according to claim 32 or 33, wherein the gas in the microballoons is N₂O,

46. The dry microballoons according to claim 32 or 33, wherein the gas in the microballoons is a rare gas.

47. The dry microballoons according to claim 32 or 33, wherein the gas in the microballoons is methane.

48. The dry microballoons according to claim 32 or 33, wherein the gas in the microballoons is helium.

49. The dry microballoons according to claim 32 or 33, wherein the gas in the microballoons is CO₂.

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